



CHEMONICS INTERNATIONAL INC.



NICARAGUA ECONOMIC ANALYSIS AND RECOMMENDATION 3:  
DR-CAFTA QUANTITATIVE IMPACTS AND DETERMINANTS OF COMPETITIVENESS

BRIEFING PAPER FOR IMPROVING THE BUSINESS AND INVESTMENT CLIMATE  
AND IMPLEMENTING ECONOMIC REFORMS IN NICARAGUA UNDER THE  
GENERAL BUSINESS TRADE AND INVESTMENT  
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## CONTENTS

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SECTION I	Key Quantitative Impacts of DR-CAFTA	3
	A. Introduction	3
	B. International Trade Agreements Negotiated by CA/DR Region	4
	C. Economic and Country Trade Profiles of CA/DR Region	5
	D. Trade with the United States	6
	E. Benefits from Trade Liberalization under the DR-CAFTA	8
	E1. U.S. International Trade Commission (USITC) Impact Estimates	9
	E2. Impacts on Textile, Apparel, and Leather Products	11
SECTION II	Determinants of Competitiveness	13
	A. Looking at the Firm Level	13
	B. Determinants of Nicaragua's Firms Competitiveness	14
SECTION III	Conclusions and Recommendations	19

## SECTION I KEY QUANTITATIVE IMPACTS OF DR-CAFTA

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### A. Introduction

The Nicaraguan economy cannot meet the population's demands for jobs and income, which underscores the need to turn to international markets for new economic opportunities. Attracting foreign direct investment (FDI) thus becomes a cornerstone of the country's development plan. New investors, however, will only come to Nicaragua if business conditions guarantee adequate business performance and profit levels. Following a common policy with the rest of Central America, Nicaragua has pursued a significant number of trade agreements with commercial partners, including the recently signed Dominican Republic-Central America Free Trade Agreement (DR-CAFTA) with the United States. These trade agreements will open up market access opportunities for Nicaraguan products that could have a significant impact on the country's plan to create employment and reduce poverty.

Nonetheless, the government and private sectors will play crucial roles in realizing opportunities to overcome key competitive constraints. The operational version of the National Development Plan (NDP-O), presented to donors on September 28, 2004, outlined eight areas where steps are urgently needed to create a policy/regulatory environment conducive to business development, investment attraction, and competitiveness:

- Regulatory environment (removal of red tape)
- Property rights
- Investment in innovation, applied technology, and human capital formation
- Access to finance
- Linkages with international markets by the SME sector
- Degree of coordination and collaboration among private firms
- Environmental standards and quality controls on productive processes
- Supportive infrastructure

The NDP-O includes all the actions and initiatives that the Nicaraguan government will undertake over the next three years to establish a competitive environment conducive to innovation, business development, and employment generation. Additionally, the NDP-O takes a cluster development approach to anchor a new geographically based competitiveness approach, focused on increasing Nicaraguan's exports. Initially, the plan supports these productive clusters:

- Food industry and agribusiness
  - ◆ Specialty coffee
  - ◆ Meat and dairy
  - ◆ Shrimp
- Forestry and wood products
- Tourism
- Light textile manufacturing and apparel

The NDP-O states from the outset that the enterprise sector must be the engine of growth; hence, results depend on the ability of the private sector to compete for new market access opportunities and to win. For this to happen, however, the Nicaraguan private sector has to face competitive challenges at the firm level in marketing and sales, innovation, technology and production, management, finance and accounting, and human resources development.

First, this briefing paper analyzes main implications of the DR-CAFTA for Central America, and especially Nicaragua, taking into account a recent analytical model developed by the U.S. International Trade Commission (USITC). Second, the paper will examine Nicaraguan firms' competitiveness in light of six determinants of competitiveness. Finally, the paper looks at the farm sector as a driver to assist rural Nicaraguan families in lifting themselves out of poverty, and finally, the paper draws conclusions and makes recommendations to policy makers.

## **B. International Trade Agreements Negotiated by CA/DR Countries**

Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Dominican Republic, are all members of the World Trade Organization (WTO). All receive unilateral (i.e., nonreciprocal) trade preferences from the United States and the European Union (EU). Additionally, they all participate in the following regional trade agreements with other Latin American and Caribbean countries (Table 1).

**Table 1. International Trade Agreements Negotiated by DR-CAFTA Members**

- Central American Common Market (CACM) members: Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua
  - ◆ A common external tariff ranging from 5 to 15 percent
  - ◆ Progress toward implementing a regional FTA has been uneven as tariffs have been reduced at different speeds
- Costa Rica-Caribbean Community FTA (signed 2004) Caribbean Community (CARICOM)
  - ◆ Members: Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Haiti, Jamaica, Montserrat, Saint Lucia, Saint Kitts and Nevis, St. Vincent and the Grenadines, Suriname, and Trinidad and Tobago
- Costa Rica-Canada FTA (effective 2002)
- Central America-Chile (signed 1999)
  - ◆ Costa Rica-Chile (effective 2002)
  - ◆ El Salvador-Chile (effective 2002)
  - ◆ Others pending implementation
- Central America-Panama FTA (signed 2002)
- Central America-Dominican Republic FTA (signed 1998)
  - ◆ Costa Rica-Dominican Republic (effective 2002)
  - ◆ El Salvador-Dominican Republic (effective 2001)
  - ◆ Guatemala-Dominican Republic (effective 2001)
  - ◆ Honduras-Dominican Republic (effective 2001)
- El Salvador, Guatemala, Honduras FTA with Mexico (effective 2001)
- Nicaragua-Mexico FTA (effective 1998); Canada (2004), Dominican Republic (2002), Taiwan (pending), among others.
- Dominican Republic-CARICOM FTA (signed 1998)

In the case of the United States, all six countries are beneficiaries under the U.S. Caribbean Basin Economic Recovery Act (CBERA) and the Caribbean Basin Trade Partnership Act (CBTPA). All but Nicaragua are designated under the U.S. Generalized System of Preferences (GSP). CBTPA provides duty-free treatment to some products previously ineligible for CBERA, most notably certain apparel, as well as equivalent treatment for Mexico under the North American Free Trade Agreement for products previously ineligible for duty-free treatment, including certain footwear; canned tuna; handbags, luggage, flat goods, work gloves, and leather wearing apparel; petroleum; and certain watches and watch parts. CBERA benefits are permanent whereas GSP expires in 2006, and CBTPA expires in 2008. The U.S.-Dominican Republic-Central America FTA will enhance these preferences and make them permanent, and afford reciprocal duty-free treatment to U.S. goods in the Central America/Dominican Republic (CA/DR) region.

The European Union (EU), on the other hand, provides duty-free access to EU markets for all industrial products as well as duty-free access for some agricultural products from all six countries under the EU GSP program, scheduled to expire in 2006. Dominican Republic is included as one of the African, Caribbean, and Pacific (ACP) countries that traditionally have had nonreciprocal preferential access to the EU market for eligible goods under the EU's Lomé Convention. Effective in 2003, the Lomé Convention was replaced by EU Partnership Agreements with individual ACP countries. Trade preferences are to be based on the EU GSP program.

### **C. Economic and Country Trade Profiles of CA/DR Region**

The CA/DR region represents a market of 43 million people with a combined GDP of around US\$201 billion, measure in Purchasing Power Parities (PPP) (Table 2). Total trade surpassed the US\$50 billion in 2003, and, as a whole, the region presented a trade deficit of US\$11.5 billion, with imports surpassing exports by 59 percent.

**Table 2: CA/DR Region, Economic Indicators, 2003**

	<b>Costa Rica</b>	<b>El Salvador</b>	<b>Guatemala</b>	<b>Honduras</b>	<b>Nicaragua</b>	<b>Dominican Republic</b>	<b>Region</b>
<b>Population (million)</b>	3.9	6.4	12.0	6.8	5.3	8.6	43.0
<b>GDP (US\$ bn, PPP)</b>	37.7	28.0	50.0	18.0	13.3	54.0	201.0
<b>GDP per capita (US\$, PPP)</b>	9,034	4,210	3,838	2,561	2,427	6,168	4,706 average
<b>GDP Growth rate - percent</b>	5.6	2.0	2.1	3.2	2.3	-0.4	2.5 average
<b>Goods exports (US\$ bn)</b>	6.1	3.2	2.8	1.4	0.7	5.4	19.6
<b>Goods imports (US\$ bn)</b>	7.2	5.4	5.7	3.1	1.8	7.9	31.1
<b>Urban Unemployment( percent)</b>	5.8	7.0	5.2	6.3	10.7	15.6	8.1
<b>Inflation percent</b>	9.9	2.5	5.9	6.8	6.5	40.0	15.5 average

Note: Purchasing Power Parities (PPPs) are currency conversion rates that both convert to a common currency and equalize the purchasing power of different currencies, eliminating the differences in price levels between countries in the process of conversion.

Except for the Dominican Republic, the region presented a healthy economic performance during 2003 with positive growth and a one digit inflation rate. Unemployment is a problem in both Nicaragua and the Dominican Republic. Nicaragua is the smallest economy of the region with the lowest per capita GDP, reflecting widespread poverty.

#### **D. Trade with the United States**

Dominican Republic, Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua combined ranked as the 12th largest market for U.S. exports in 2003, and the 15th largest U.S. supplier in 2003, with a total combined trade of US\$31.2 billion (Table 3). In 2002 and 2003, about 80 percent of U.S. imports from the CA/DR region entered free of duty. Over the last three years, the CA/DR region has enjoyed a trade surplus of some US\$2.5 billion with the United States.

**Table 3: U.S. Merchandise Trade with the CA/DR region, 2000-2003**

(US\$ million)				
	2000	2001	2002	2003
U.S. exports	13,202	13,025	13,532	14,372
U.S. imports	16,150	15,304	16,013	16,862
Trade balance	-2,948	-2,279	-2,481	-2,490
Total imports	16,150	15,304	16,013	16,862
Dutiable <sup>1</sup>	5,477	3,504	3,273	3,340
Duty free	10,673	11,800	12,740	13,522
• NTR	8,596	4,830	4,634	4,924
• CBERA	1,744	1,940	2,252	2,193
• CBTPA	149	4,959	5,936	6,167
• GSP	182	162	82	236
Duty-free imports as a percentage of total imports (percent)				
	66.1	77.1	79.6	80.2

<sup>1</sup> Includes reduced-duty imports under CBERA and CBTPA

Source: U.S. Department of Commerce

### CA/DR Region and Individual States within the American Union

An analysis of the trade relationship between the United States and the CA/DR region indicates how important the CA/DR region is for individual states within the United States. The U.S. Census Bureau 2003 data show at least one of the six CA/DR countries appears in the top 25 destinations for export products. This is the case for 24 states within the United States (Table 4). A total of US\$8.8 billion of U.S. exports to the CA/DR region is included in the top 25 export destination trade statistics, which represent 61 percent of the total U.S. exports to the region.

Florida has the greatest trade interest in the CA/DR region, having five of the countries in its top 25 export destination list, followed by North Carolina and Louisiana. The Dominican Republic stands as an important export destination for Puerto Rico and New York, while Costa Rica is an important destination for Massachusetts.

**Table 4: Total U.S. Exports (Origin of Movement)  
For Which at Least One Central American Country is Within the Top 25 Destination  
Based on 2003 Dollar Value (in millions of dollars)**

State	Costa Rica	El Salvador	Guatemala	Honduras	Nicaragua	Dom. Rep.	Total Trade with CA
Alabama	70.1	65.8		170.5		75.1	381.5
Arizona	233.0						233.0
Arkansas		17.2					17.2
Connecticut						69.7	69.7
Delaware	20.2						20.2
Florida	638.5	362.8	595.9	358.3		1,059.2	3,014.7
Georgia				150.8		164.7	315.5
Kentucky				49.4			49.4
Louisiana	194.2		214.0			275.2	683.4
Maine						25.9	25.9
Massachusetts	312.8						312.8
Mississippi			54.8	93.8		60.2	208.8
Nebraska						16.5	16.5
New Hampshire							0.0
New Mexico	103.9						103.9
New York						315.9	315.9
Oklahoma					18.0		18.0
Oregon	237.4						237.4
North Carolina	320.3	315.5		695.9		278.7	1,610.4
Pennsylvania				114.6			114.6
Puerto Rico						728.4	728.4
South Carolina		91.7	71.4	73.4			236.5
Utah	32.2					9.1	41.3
Virgin Islands			0.7				0.7
<b>Total</b>	<b>2,162.6</b>	<b>853.0</b>	<b>936.8</b>	<b>1,706.7</b>	<b>18.0</b>	<b>3,078.6</b>	<b>8,755.7</b>

Source: Compiled from official statistics from the U.S. Census Bureau.

Twelve of the 24 U.S. states with keen interest in CA/DR have the Dominican Republic in their top 25 export destination list, followed by 10 states who have Costa Rica in their top destination list. Honduras appears in the top list of eight states, while El Salvador and Guatemala appear in the top list of five states. Nicaragua is an important destination only for Oklahoma.

### **E. Benefits from Trade Liberalization under the DR-CAFTA**

The free trade agreement (FTA) between the United States and CA/DR partners will increase market access for U.S. manufacturers by immediately eliminating tariffs on more than 80 percent of U.S. manufactured goods exported to the region, with remaining tariffs phased out over 10 years. At the same time, FTA will enhance trade preferences under the CBERA and CBTPA programs for CA/DR and make them permanent. U.S. farmers will benefit from increased export opportunities through new tariff rate quotas (TRQs) and the immediate elimination of tariffs on a wide range of agricultural products. Tariffs on TRQ products will be phased out over periods of



up to 20 years and over 15 years on other farm products. CA/DR producers will benefit from immediate increased access to the U.S. market, especially for peanuts, meat, dairy, and sugar.

### **E1. U.S. International Trade Commission Impact Estimates**

Through a general equilibrium model analysis, USITC estimates that once the agreement is carried out, U.S. imports from CA/DR will increase by US\$2.8 billion, while U.S. exports to the region will increase by US\$2.7 billion. Accordingly, an estimated trade increase of US\$5.5 billion will be a direct result of the DR-CAFTA. Table 5 presents the main result of the model including a sectoral decomposition of the bilateral trade equilibrium after full implementation of the market access components of the FTA. As seen in Table 5, sectors facing the highest tariffs will experience the greatest effects of eliminating the tariffs.

U.S. exports will increase in textiles, apparel, and leather products (US\$803 million); petroleum, coal, chemical, rubber, plastic products (US\$406 million); other machinery and equipment (US\$401 million); other manufactures (US\$235 million); grains (US\$157 million); and motor vehicles (US\$180 million). To some extent, the increase in textile and apparel exports consists of textile inputs to the CA/DR region's expanded production of apparel. Textile and apparel export increases and the elimination of CA/DR tariffs are thus driven by increased demand for inputs to production for their export markets in the United States.

CA/DR exports will experience significant increases in textiles, apparel, and leather products (US\$3,067 million); sugar manufacturing (US\$113 million); and meat products (US\$13 million). The increase in textiles, apparel, and leather products will account for more than the total net increase in exports to the United States (about US\$2.8 billion) and will largely displace imports from other countries. The extent to which this trade shift occurs in apparel is likely to depend on the ability of CA/DR producers to adjust to an increase in competition in the U.S. market from Asian suppliers following quota elimination in 2005.

Many other goods exported to the United States from the CA/DR region do not face tariffs. Since there are no tariffs to eliminate, such sectors will not be expected to show increases in exports. In fact, for many of these sectors, the model shows some decline in U.S. imports, including services (-US\$100 million); other machinery and equipment (-US\$96 million); electronic equipment (-US\$56 million); and vegetable, fruits, and nuts (-US\$31 million).

**Table 5: U.S.-DR/CAFTA: Estimated Impacts on Trade Flows between the CA/DR Region and the U.S after Full Implementation of the DR-CAFTA**

Sector	U.S. imports			CA/DR imports from the United States		
	Base Value before FTA	Change after FTA full implementation <sup>1</sup>		Base Value before FTA	Change after FTA full implementation <sup>1</sup>	
	Million dollars	Percent		Million dollars	Percent	
Textile, apparel, and leather products	11,763.9	3,067.5	26.08	5,350.0	802.8	15.01
Sugar manufacturing	329.3	113.2	34.38	0.4	0.6	166.38
Meat products	79.4	13.2	16.74	204.0	84.1	41.24
Dairy products	4.7	2.9	62.18	22.9	5.9	25.77
Sugar crops	0.0	0.0	NA	0.0	0.0	NA
Grains	0.1	0.0	-0.99	722.8	157.3	21.77
Cattle and horses	0.7	0.0	-2.06	3.4	0.3	10.23
Transportation equipment n.e.c. <sup>2</sup>	4.5	-0.2	-4.01	170.0	42.0	24.72
Motor vehicles and parts	16.0	-0.4	-2.45	372.9	180.4	48.37
Animal products n.e.c.	61.8	-0.9	-1.44	37.3	1.7	4.51
Wood products	156.5	-7.7	-4.91	127.5	42.5	33.38
Metals n.e.c. and metal products	154.6	-10.5	-6.80	134.0	14.2	10.59
Ferrous metals	300.3	-14.4	-4.78	325.8	57.3	17.57
Other manufactures	469.6	-16.9	-3.61	1,031.1	234.6	22.75
Petroleum, coal, chemicals, rubber, plastic	473.8	-17.4	-3.68	3,147.8	406.1	12.90
Other crops	746.0	-19.3	-2.59	237.6	17.3	7.28
Coal, oil, gas, other mineral	220.9	-23.2	-10.49	35.5	13.4	37.86
Other processed food and tobacco products	1,126.2	-25.5	-2.27	639.7	53.5	8.37
Vegetables, fruits, and nuts	1,717.5	-31.5	-1.84	53.8	7.7	14.23
Electronic equipment	1,041.7	-56.4	-5.41	1,976.8	110.2	5.58
Other machinery and equipment	1,902.9	-96.4	-5.07	2,010.7	400.6	19.93
Services <sup>3</sup>	,738.3	-100.0	-5.75	710.4	32.8	4.62
<b>Total</b>	<b>22,308.6</b>	<b>2,776.2</b>	<b>12.44</b>	<b>17,314.03</b>	<b>2,665.6</b>	<b>15.40</b>

**Source:** USITC: Potential Economy-wide and Selected Sectoral Effects of the U.S.-Central American and Dominican Republic FTA, July 2004.

<sup>1</sup> The simulated FTA consists of tariff and quota liberalization.

<sup>2</sup> The decline in U.S. imports of many products is a result of the reallocation of resources in the small economies of the partner countries as they shift output to take advantage of increased export opportunities in other products such as textiles, apparel, and sugar.

<sup>3</sup> No U.S. tariffs or other quantitative import measures for services were removed in this analysis.

Declines predicted for CA/DR exports in goods other than textiles, apparel, and sugar products are owed in part to a shortcoming in the general equilibrium model. The model assumes there will be no important investment inflows into these sectors, thus impacts are likely to occur under relatively unchanged investment flows for sectors other than textile, apparel, and leather products. There could be significant positive impacts, however, derived from a better positioning of the region, and of Nicaragua in particular, as a great location for medium value manufacturing products, now that duty-free preferences into the U.S. market are becoming permanent.

## E2. Impacts on Textile, Apparel and Leather Products

U.S. apparel imports from the CA/DR region consist mostly of high-volume, low-unit-valued garments, such as basic knit shirts, pants, underwear, and nightwear. Such garments have relatively low labor content and predictable consumer demand. Their production involves large and standardized runs, simple sewing tasks, and few styling changes, which together help offset the higher cost of labor in the region vis-à-vis Asia (Table 6). CA/DR producers generally have lower labor productivity than most major Asian exporting countries. According to the USITC, shipping times from the CA/DR region range from two to seven days depending on the country and the U.S. port of entry, compared with 12 to 14 days from China, and as many as 55 days from Indonesia. The proximity of the CA/DR region to suppliers and markets in the United States enables U.S. firms to maintain greater management control over production, adjust orders in response to changes in market demand, and obtain quicker turnaround than those firms sourcing from Asia.

**Table 6: Hourly Production Cost per Country**

Country	Hourly Cost US\$
Guatemala	1.65
Honduras	1.29
Nicaragua	0.90
Dominican Republic	1.87
China	0.60
India	0.90
Bangladesh	0.30
Vietnam	0.30

DR-CAFTA provides for the immediate elimination of duties on textiles and apparel that meet the rules of origin specified in the FTA (originating goods), retroactive to January 1, 2004. The FTA also provides exceptions to the general yarn forward rule of origin, including tariff preference levels for Nicaragua and Costa Rica. The tariff preference level (TPL) for Nicaragua, the smallest and least-developed apparel supplier among the FTA countries, extends duty-free treatment for 10 years to cotton and manmade-fiber apparel made in Nicaragua from non originating fabrics, provided that fabrics are cut and sewn into garments in Nicaragua with regional thread. The TPL is equal to 100 million square meter equivalents of such apparel in each of the first five years of the FTA; it will be reduced in equal annual increments over the subsequent five years, reaching zero after 10 years.

Given Nicaragua's TPL obtained for 100 million square meter equivalents and its labor cost for textile and apparel products that remains at 37 percent below the CA/DR average, Nicaragua can emerge as an attractive investment location for the United States, Asia, Middle East, and other CA/DR textile and apparel firms seeking to increase their competitiveness within the U.S. market. In the short term, depending on the management of the assigned TPL, Nicaragua has the potential to increase its apparel exports by more than 50 percent over the next four years, resulting in more than 25,000 additional jobs. But the increase can be even higher as the country consolidates its investment promotion policies and improves the internal business environment. During the last two years, Nicaragua attracted one new textile and apparel firm per month into the country. This impressive performance indicates a positive change in perception on the part of the investor's community toward Nicaragua as an appropriate place to do business. Certainly, this sector represents the highest growth potential for Nicaragua in the short term.

## SECTION II: DETERMINANTS OF COMPETITIVENESS

### A. Looking at the Firm Level

Descriptions and explanations of competitiveness in Nicaragua follow Michael Porter's competitiveness framework in defining the government territorial-based National Development Plan (NDP). In a recent internal discussion, Bill Kedrock, Chemonics' senior manager for Africa, is proposing that we look at competitiveness by taking into consideration a wide range of competitiveness functions within the firm and their observable characteristics. Figure 1 shows six key determinants to business competitiveness and their observable characteristics at four different stages of enterprise competitiveness. The approach is by no mean complete and it can change as internal discussion progresses.

**Figure 1: Determinants of Competitiveness**

Determinants of Competitiveness	Degree of competitiveness of a business in an industry				High
	Low	1	2	3	
Marketing/ Sales	no marketing; no sales force; no customer orientation; local market; advantage lies in low price and is commensurate with quality...	some control of distribution; some market awareness; some use of sales techniques; still compete largely on price...	control of domestic distribution; forward/backward integration; customer orientation; branding; international market acceptance; advantage lies in quality/service...	broad domestic and international market penetration; sales force; control of distribution channels; advantage lies in quality/innovation/service; ability to identify demand and supply it...	
Innovation*	none or simple adaptation...	more sophisticated adaptation within existing product lines...	some R&D spending; copy-cat innovation that expands product or service offerings...	capacity for internal innovation that can redefine a market...	
Technology/ Production	non-adapters or quite slow...	some technology and production sophistication...	technology and production sophistication; licensing of new technology...	cutting edge; capable of redefining market...	
Management/ Leadership	all in the family; no delegation; no strategy; reactive...	still all in the family with some purposeful skills enhancement; strategy development focuses on near-term; tactical...	professional management that goes beyond the family; delegation; medium-term strategy; visioning...	high degree of delegation; long-term strategy; ability to foresee and manage change...	
Finance/ Accounting	all in the family; no financial management; no transparency; multiple books...	still all in the family though some improved financial management and transparency; some parttime accounting/finance help...	full-time finance/accounting personnel; cost controls; cash flow management; purposeful financial skills enhancement...	sophisticated financial management; access to multiple sources of capital...	
Human Resource Dev.	no sophistication; no training...	some interest in personnel training; passive recipient of what is offered...	training at all levels; active party in tailoring training programs; some coaching/mentoring...	emphasis on training/skills enhancement at all levels and across all fields; offered in-house and outside...	

\*Innovation, as defined here, is intellectual as well as scientific. It is the process of creating vs adapting whether technology or ideas.

Obviously not all firms have to start at Stage 1, but more importantly, in absence of a coherent and articulated business development service program, only a few will likely progress to reach Stage 4. Even though the above exhibit focuses on aspects that are more in the control of the manageable interest of business, the process will not necessarily guarantee that a critical mass of companies will move forward. In the case of Nicaragua, the private sector has been rather disengaged from international markets for the last two decades, which requires a change in mindset as well as the development of meaningful market capability skills, before a critical mass of vibrant, competitive, and successful firms can develop within a given industry.

While various aspects of a sound business environment are not included in the approach of Figure 1, it is clear that firms do not operate in a vacuum. Though not included in the above framework, infrastructure and a sound policy/regulatory environment are critical to enterprise success. Companies require the use of public infrastructure and operate within a policy/regulatory environment established by government. This environment has great impact on the speed and ability of firms to move to the highest levels of competitiveness. In that regard, the operational version of the NDP devotes significant resources to improve the business environment framework conducive to business and investment development in Nicaragua. While sound policy identification is not much of a problem for Nicaragua, the country has shown significant shortcomings when it comes to policy implementation. As explained in Section I, the NDP-O identifies key constraints that negatively affect firms' competitiveness in Nicaragua, and then proposes a series of policy initiatives and actions to overcome them.

## **B. Determinants of Nicaraguan Firms' Competitiveness**

Though still under discussion, the framework in Figure 1 provides some useful initial insights when thinking about the competitiveness of the Nicaraguan's enterprise sector. For the most part, companies in the natural resource-based sector and the local manufacturing sector tend to be grouped in Stages 1 and 2, with some are not easily replicable exceptions.

It is not clear how this approach will internalize potential impacts of the cluster approach that the Nicaraguan government is supporting as part of the NDP. For a cluster to emerge, one expects a critical mass of companies at level 3 or at least straddling levels 2 and 3, as it is difficult for a struggling company to divert human and financial capital to cluster development. Ireland experienced the best results with those clusters where a key lead industry champion was found, and in their case, that meant world-class firms with access to markets, technology and finance.

Nicaragua has prioritized seven initial clusters with foreign direct investment contribution occurring in three: light manufacturing, shrimp, and tourism. Other natural resource-based clusters such as coffee, meat and dairy, and forestry, are more driven by local investment and show little sophistication. Given the additional preferential quota obtained through DR-CAFTA for the textile-apparel industry, the light manufacturing cluster is the only one likely to show significant increased trade flows over the next three years, though most operations within this industry still engage in high volume, low value products.

### *Food and Natural Resource-based Industries*

There are four key food and natural resource-based industries prioritized under the three-year operative version of the NDP: specialty coffee, meat and dairy, shrimp, and forestry and wood products. The first three comprise the food industry cluster.

*Coffee.* This industry is one of the most important contributors to rural employment, generating some 150,000 direct jobs. Over the last three years, the industry has been readjusting to a structural change in the world supply, resulting from new entrants to the market, such as Vietnam, which has resulted in freefalling coffee prices. Accordingly, Nicaragua's total coffee exports have declined from 25 to 14 percent over this period.

Table 7 shows the relative competitiveness position of the coffee industry when viewed through six key determinants of competitiveness at the firm level. Three kinds of producers are involved in this industry: a handful of medium-large sophisticated producers who sell to differentiated markets, a significant number of specialized small producers who sell to specialized markets (i.e., organic, Fair Trade, Rainforest Alliance), and the bulk of producers who sell to the commodity market. Firms selling in the differentiated market tend to be more sophisticated as the higher quality requirements imposed on them act as a driver for their modernization. The industry, especially the production side of it, still exhibits very low productivity levels. Overall these firms are at Stage 2 in their competitiveness position. Significant work is needed in the management/leadership and sales and marketing areas. These firms need to grow from family businesses into actual enterprises that focus on the industry's demand side and form strategic alliances in domestic and international markets. There is progress in upgrading the skill levels of cup quality tasters in Nicaragua and quality-inducing programs such as the Cup of Excellence, and the Q-Contract contests are having a positive effect on the industry as a whole.

*Meat and Dairy.* Cheese exports for 2003 increased by more than 50 percent compared to the previous year's volume, reaching 20 million kg. Meat exports have been steadily increasing at more than eight percent a year over the last three years, representing more than 10 percent of total goods exported (without counting the Free Trade Zones' exports). This is a very fragmented industry with more than 100,000 producers and more than 70 traditional processing plants. Meat and dairy products are still at the lower end of the value chain and the industry requires significant private investment to upgrade processing technologies, expand processing capacity, and develop new products with higher value added content.

On the production side, most firms exhibit low-level sophistication and low productivity rates. With the exception of a few medium to large dairy farms that use modern production techniques, firms within this industry are still located in Stage 1 of their competitiveness process.

**Table 7: Key Food and Natural Resource-based Industries  
Existing Competitiveness Conditions of Firms in Nicaragua**

<b>Determinant of Competitiveness</b>	<b>Coffee</b>	<b>Meat and Dairy</b>	<b>Shrimp</b>	<b>Forestry/Wood Products</b>
Sales and Marketing	<ul style="list-style-type: none"> <li>Mostly traded in the commodity market</li> <li>Sales conducted by large international coffee houses</li> <li>Very little sales force, no customer orientation</li> </ul>	<ul style="list-style-type: none"> <li>No marketing, no sales force</li> <li>Little customer orientation</li> <li>Focus on low-value products</li> <li>Mostly local market</li> <li>International sales conducted by a few large local firms</li> </ul>	<ul style="list-style-type: none"> <li>Sales and marketing conducted by large local and international firms</li> <li>Low value added products</li> <li>No sales force</li> <li>Face tough price competition</li> </ul>	<ul style="list-style-type: none"> <li>Industry in infant stages</li> <li>No marketing, no sales force</li> <li>Low value added products</li> </ul>
Innovation	<ul style="list-style-type: none"> <li>Most producers with no or simple adaptation</li> <li>A handful with more sophisticated technological processes</li> </ul>	<ul style="list-style-type: none"> <li>Industry exhibiting initial stage of copy-cat innovation in meat and cheese processing.</li> <li>Simple adaptations still the norm at the farm level</li> </ul>	<ul style="list-style-type: none"> <li>Copy-cat innovation utilized by firms under intensive production system</li> <li>Simple adaptations still the norm for traditional farms</li> </ul>	<ul style="list-style-type: none"> <li>No innovation beyond basic adaptation is used within this industry; except for a handful of sawmill operations</li> </ul>
Technology/ Production	<ul style="list-style-type: none"> <li>There are 22,700 producers; 86 percent produce less than 100 qq.</li> <li>Crop represents 80 percent of value</li> <li>Low level of postharvest technology</li> <li>Only 30 percent with potential to enter differentiated market</li> </ul>	<ul style="list-style-type: none"> <li>There are 100,000 producers</li> <li>Basic production techniques result in low productivity</li> <li>Industry at low end of value chain, but has significant potential to enter differentiated markets (i.e., organic markets)</li> <li>Lack of industry champion</li> <li>Limited FDI and overall investment in industry</li> </ul>	<ul style="list-style-type: none"> <li>Intensive system: 10,000 pound/ha/cycle</li> <li>Traditional system: 600 pound/ha/cycle</li> <li>Industry at lower end of value added chain</li> <li>Opportunity to focus on packaging, distribution, customer orientation, higher value products</li> </ul>	<ul style="list-style-type: none"> <li>Very limited private plantations; the industry relies on natural forest for inputs</li> <li>Industry at lower end of value chain with an infant furniture activity emerging</li> <li>Country undecided between forest exploitation activities or selling environmental services (i.e., carbon sequestration)</li> </ul>
Management/ Leadership	<ul style="list-style-type: none"> <li>Most small and medium firms operate as family businesses</li> <li>There are few leaders</li> <li>Co-ops don't have a real enterprise structure</li> </ul>	<ul style="list-style-type: none"> <li>Most small and medium firms operate as family businesses</li> <li>Lack of industry champion</li> </ul>	<ul style="list-style-type: none"> <li>FDI within the industry brings some degree of professional management and delegation</li> <li>Traditional shrimp firms are run as family businesses</li> </ul>	<ul style="list-style-type: none"> <li>No single champion exists to provide leadership in the industry</li> <li>Small furniture firms operate as family businesses</li> </ul>
Finance/ Accounting	<ul style="list-style-type: none"> <li>Only a handful of producers with auditable accounting records</li> <li>Restricted access to long-term financing</li> </ul>	<ul style="list-style-type: none"> <li>A handful of producers with auditable accounting records</li> </ul>	<ul style="list-style-type: none"> <li>Lack of financing poses serious impediment to industry modernization and expansion</li> <li>Only large firms with auditable accounting records</li> <li>Perceived as high risk industry</li> </ul>	<ul style="list-style-type: none"> <li>There are very few sophisticated players within this industry</li> <li>There is not specialized long-term financing program</li> <li>Some opportunity exists for certified wood-based activities</li> </ul>
Human Resources	<ul style="list-style-type: none"> <li>Little sophistication in production and processing</li> <li>Some installed capacity for quality training, including a couple of world class cup trainers</li> </ul>	<ul style="list-style-type: none"> <li>No coherent training program for firms within this industry</li> </ul>	<ul style="list-style-type: none"> <li>No coherent training program for the firms within this industry</li> <li>Lack of quality testing labs and certification programs</li> </ul>	<ul style="list-style-type: none"> <li>There is no coherent training program for the firms within this industry</li> <li>Some training available for the furniture industry</li> </ul>
Position within four stages scale	<ul style="list-style-type: none"> <li>Medium firms: Stage 2</li> <li>Small firms: Stage 1</li> <li>Specialty firms: Stage 2</li> </ul>	<ul style="list-style-type: none"> <li>Medium firms: Stage 2</li> <li>Small dairy firms and trad. meat proc. firms: Stage 1</li> </ul>	<ul style="list-style-type: none"> <li>Intensive firms: Stage 3</li> <li>Traditional firms: Stage 1</li> </ul>	<ul style="list-style-type: none"> <li>Processing firms: Stage 2 and 3</li> <li>Producer firms: Stage 1 with few exceptions in 2.</li> </ul>



For processing, meat plants consist of obsolete municipal slaughtering houses. However, two modern processing facilities have the capacity to produce high value products.

While the current industry is in the beginning stage, the meat and dairy industry represent higher potential for the country's economic development. Nicaragua has a real potential to become a significant player in differentiated markets (i.e., organic) for meat and dairy products. Large farms as well as a growing number of small and medium farms are in the final stages of certification that can open up new opportunities. To realize this potential, however, a strong skill development program needs to be in place. At the same time, significant private investment is required to increase productivity, reach critical mass levels, and upgrade processing facilities. The country should also move fast to establish the necessary certification and quality controls to compete in sophisticated markets.

*Shrimp.* Fishery, both open sea and cultivated, is one of the most important economic activities in Nicaragua with more than US\$70 million in exports. Shrimp represents 41 percent of the fishery industry. Shrimp is cultivated in the department of Chinandega and involves 153 firms, 68 of which are cooperatives. There is a great deal of difference between the modern intensive production system and the traditional system, with the modern system reaching productivity levels 17 times higher than the traditional. The industry consists of shrimp farmers and medium to large processing facilities that add very little value to the natural product. Trading companies collate products in Nicaragua then sell them under generic brands to U.S. commercialization firms that add more value, repackage the product, and sell it under private labeling within the U.S. market.

Nicaragua's shrimp industry faces tough competition from large low-cost producers such as Ecuador and China. Within Central America, Mexico and Honduras are bigger players than Nicaragua. Nonetheless, Nicaraguan firms producing under the intensive system have a high enough productivity level that allows them to generate adequate profit margins. One key constraint to the industry is the lack of financing due to the higher than normal risk premium that local banks associate with this activity. Some opportunities for growth exist in the industry through converting traditional, inefficient producers into intensive and semi-intensive system. To do this, however, small firms need significant skills development and industry credit restrictions require solutions. Sales and marketing to reach the final consumer call for strategic alliances, investment attraction of distribution firms, and technological innovation.

*Forestry and wood products.* The forestry and wood product industry in Nicaragua is in its infant stages. A new forest incentive law has just been approved in hopes of attracting private investment, however, ambivalence as to how to best use forest resources is a primary problem. Many subscribe to the idea of protecting the forests and using them as a provider of environmental services, such as carbon sequestration, which can be sold internationally, but little has been done. Others believe that given the vast quantity of land with forestry potential (some 6.4 million hectares), the country should align its effort to develop a wood product industry.

The wood product industry in Nicaragua consists, for the most part, of artisans' furniture firms in the western side of the country, with some larger operations producing plywood and other products in the Atlantic region. Smuggling of forest products is pronounced within the industry,

negatively affecting investment and resource allocation. The forest industry requires a concerted effort to take advantage of the economic opportunities, including access to high value certified wood product markets. The attraction of at least one big foreign investor to the sector can provide leadership for the country to move up in the value chain. Most firms still operate using basic technologies and between Stage 1 and Stage 2 within the competitiveness process.

## SECTION III: CONCLUSIONS AND RECOMMENDATIONS

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Nicaragua's 2003 exports<sup>1</sup> were similar to export levels of almost three decades ago — an unacceptable performance given increasing demand for job and income opportunities. Changing this reality entails a concerted effort between public and private sectors. The operational version of the National Development Plan outlines government commitments over the next three years to stimulate an accelerated growth process. Public interventions, however, require the support of complementary firm level private sector initiatives to allow for a competitive enterprise sector to emerge.

### **Recommendation #1:**

As outlined in Section II of this briefing paper, DR-CAFTA will likely result in significantly increased exports for textile, apparel and leather products, and sugar manufacturing products. Nicaragua's lower labor costs and abundant labor supply might provide a temporary competitive edge to generate thousands of jobs. The Nicaraguan government is aware of this and is at this moment discussing assignment of the textile and apparel Tariff Preference Levels (TPL), obtained under the DR-CAFTA negotiations. In allocating textile and apparel TPL, as well as sugar quotas, the Nicaraguan government should follow the principle of maximizing social impact.

While the USITC model does not estimate any significant positive change other than the one mentioned, Nicaragua also has the potential to establish itself as a prime medium-value manufacturing location for U.S., Asian, Middle Eastern, and Central American investors who want to take advantage of permanent benefits available with the trade agreement. Becoming a prime location for medium-value manufacturing, though, requires a major mindset change. An "Enterprise champion" unafraid of saying that "profits are good" might be needed. Foreign direct investment will not come to Nicaragua in the amount required unless the country can show it is a good location for conducting business profitably.

The USITC model results should be an eye-opener to policy makers. Not only is the DR-CAFTA not a panacea to solve the region's economic problems, but it is likely to provide fewer opportunities there than originally anticipated. The only factors that can tip the balance in favor of Nicaragua are the FDI flows the country can generate within the medium-value manufacturing and the internationally traded service industries. There are two implications here: First, the role that Pro-Nicaragua plays is paramount, and second, a concerted government-private sector effort is needed to position Nicaragua as the primer location for medium-value manufacturing investments in the region.

### **Recommendations #2:**

Firms in prioritized food and natural resource-based industries tend to exhibit a low level of competitiveness when measured through six key determinants of competitiveness. Analysis shows that most firms are within competitiveness Stages 1 and 2 for each selected determinant.

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<sup>1</sup> Without including exports from the Free Trade Zones.

Efforts are needed in all six competitiveness function areas to guarantee that Nicaragua take full advantage of new opportunities opened up through trade agreements recently negotiated.

*Sales and Marketing.* Nicaragua enjoys a handful of world-class enterprises, especially in the financial service sector. However, firms located within the food and natural resource-based industries have few marketing or sales forces, are not customer oriented, and have little control over distribution. Brand development is incipient and there is still a wide disconnect with final consumers.

*Innovation.* Most firms use basic applications and only the bigger players lend some level of technology innovation to their production lines. Food and natural resource-based industries are engaged in high volume, low value products and there is little movement along the value chains of products and activities.

*Technology/Production.* Production processes are absolute and do not for the most part incorporate adequate quality controls. Very few firms have quality certifications, while productivity remains low for most activities within the industries. Given Nicaragua's prime land and central locations within the region, there is some potential for a medium to high value added food industry to emerge, which will require significant direct investment.

*Management/Leadership.* Most firms in Nicaragua are still run as family businesses and do not have an actual enterprise structure. Only a handful of small and medium enterprises follow a business plan and have written strategies with specified objectives and clear expected results. Attracting FDI into the food and natural resources-based industries can be a good way to bring leadership and best practices into these sectors.

*Finance/Accounting.* Small and medium firms in Nicaragua as a norm do not have auditable financial records in their operation. Only a few enterprises that leverage financing in the local banking system have some sort of accounting records. Lack of credit resources undermine the potential for these industries to modernize and expand. This is particularly true for shrimp and forestry firms.

*Human Resources.* A major impediment to quality, productivity and expansion is the overall lack of coherent training and skills development programs. The donor community supports developing skills in Nicaragua, however, efforts are fragmented and, for the most part, uncoordinated. The tax levy imposed on business through the two percent given to INATEC, operates as a disincentive for firms to spend resources on training their labor force.

The six determinants of competitiveness form a comprehensive package that Nicaragua needs to address to make headway in its development process. A concerted public-private effort to address determinants at the industry and firm levels can result in significant improvements to the current situation.

Enterprise support programs aimed at improving the competitiveness position of the local industry too often are focused on some determinants to the detriment of others. Nevertheless,

efforts are needed in all determinants to spur a new entrepreneurial spirit within the local industries, especially within the food and natural resources-based industries.

The status quo is not a viable option for Nicaragua as the rest of the region is moving fast to readjust their reality to a new market environment and new opportunities emerging from myriad regional trade agreements. Nicaragua needs to move decisively if Nicaraguans are to benefit at all from these changes in the international environment. The NDP-O offers a basis for government interventions but perhaps falls short of defining some key challenges the private sector faces for firms to take full advantage of the ambitious business environment foreseen under the plan.